

2. (currently amended) The biosensor of claim 2 wherein said mutated binding protein is selected from glucose/galactose binding proteins.

3. (original) The biosensor of claim 1 wherein said analyte is glucose or galactose.

4. (original) The biosensor of claim 2 wherein said mutated glucose/galactose binding protein has one amino acid substitution.

5. (original) The biosensor of claim 2 wherein said mutated glucose/galactose binding protein has at least two amino acid substitutions.

6. (currently amended) The biosensor of claim 3 wherein said mutated glucose binding protein includes one amino acid substitution selected from the group consisting of a cysteine at position 11, a cysteine at position 14, a cysteine at position 19, a cysteine at position 43, a cysteine at position 74, a cysteine at position 107, a cysteine at position 110, a cysteine at position ~~H12~~112, a cysteine at position 113, ~~a cysteine at position 137~~, a cysteine at position 149, a cysteine at position 213, a cysteine at position 216, a cysteine at position 238, a cysteine at position 287, a cysteine at position 292.

7. (original) The biosensor of claim 4 wherein said mutated binding protein has at least one histidine tags.

8. (original) The biosensor of claim 2 wherein said mutated glucose/galactose binding protein includes a cysteine present at position 213.

9. (original) The biosensor of 8 wherein said mutated glucose binding protein further includes a histidine tag.

10. (original) The biosensor of claim 2 wherein said mutated glucose binding protein includes a cysteine present at position 149 coupled to said sensor surface.

11. (original) The biosensor of 10 wherein said mutated glucose binding protein further includes a histidine tag.

12. (original) The biosensor of claim 5 wherein said mutated glucose binding protein includes at least two amino acid substitutions selected from the group consisting of: a cysteine at position 112 and a serine at position 238, a cysteine at position 149 and a serine at position 238, a cysteine at position 152 and a cysteine at position 182, a cysteine at position 152 and a serine at position 213, a cysteine at position 213 and a cysteine at position 238, a cysteine at position 149 and an arginine at position 213, a cysteine at position 149 and a serine at position 213 and a serine at position 238, and a cysteine at position 149 and an arginine at position 213 and a serine at position 238 coupled to said sensor surface.